

WHAT IS CLAIMED IS:

1 1. A method comprising:

2 reading one or more event data, the one or more event data corresponding to an
3 event monitored from a system;

4 for each event datum, compressing the event datum if the event datum is
5 determined to be compressible;

6 creating a processed event record, the processed event record conforming to a
7 record format; and

8 storing the one or more event data in the processed event record in accordance
9 with the record format.

1 2. The method of claim 1, wherein said creating a processed event record and storing
2 the one or more event data in the processed event record in accordance with the
3 record format comprises one of the following:

4 if one or more of the one or more event data is determined not to be compressible,
5 then:

6 creating an uncompressed event record in an uncompressed record format;
7 and

8 storing each event datum in an uncompressed format in the uncompressed
9 event record;

10 if each of the one or more event data is determined to be compressible, then:

11 creating a compressed event record in a compressed record format; and

12 storing each event datum in a compressed format in the compressed event
13 record; and

14 if one or more of the one or more event data is determined not to be compressible,
15 then:

16 creating a hybrid event record in a hybrid record format; and
17 storing each uncompressed event datum in an uncompressed format in the
18 hybrid event record, and storing each compressed event datum in a
19 compressed format in the hybrid event record.

1 3. The method of claim 1, wherein said compressing each event datum comprises
2 characteristics-based compression.

1 4. The method of claim 3, wherein the characteristics-based compression comprises
2 using a selected one of one or more compression algorithms to compress the event
3 datum, wherein the selected compression algorithm compresses the event datum
4 in accordance with one or more characteristics of the event datum.

1 5. The method of claim 4, additionally comprising setting the one or more
2 compression algorithms.

1 6. The method of claim 3, wherein the characteristics-based compression algorithm
2 comprises for at least one of the one or more event data:

3 generating a hash from a value, the value based, at least in part, on one or more
4 characteristics of a given event datum of the at least one of the one or
5 more event data;

6 mapping the hash to a dictionary index in a dictionary, the index corresponding to
7 a dictionary entry; and

8 if the dictionary entry corresponds to the given event datum, then outputting the
9 dictionary index.

1 7. The method of claim 6, additionally comprising if the dictionary entry does not
2 correspond to the given event datum, then outputting the given event datum.

1 8. A method comprising:

2 reading one or more processed event records from an event buffer, each processed
3 event record including one or more processed event data corresponding to

4 one or more uncompressed event data; and

5 generating one or more client uncompressed event data corresponding to the one
6 or more uncompressed event data, said generating one or more client
7 uncompressed event data including one of:

8 decompressing an event datum if the event datum is in a compressed
9 format; and

10 outputting an event datum if the event datum is not in a compressed
11 format.

1 9. The method of claim 8, wherein said decompressing the event datum comprises:
2 mapping a plurality of bits of the event datum to a dictionary index in a
3 dictionary, each entry in the address dictionary including a dictionary
4 index and a corresponding dictionary entry; and
5 using the dictionary entry to obtain the one or more uncompressed event datum.

1 10. The method of claim 9, wherein if the event datum is not in a compressed format:
2 generating a hash value from a compression value, the compression value based,
3 at least in part, on the event datum;
4 mapping the hash value to a dictionary index in a dictionary having one or more
5 entries, each entry corresponding to a hash value and a dictionary entry;
6 replacing the dictionary entry with the compression value, said replacing
7 occurring at an entry of the dictionary corresponding to the hash value.

1 11. An apparatus comprising:
2 circuitry capable of:
3 reading one or more event data, the event data corresponding to an event
4 monitored from a system;

5 for each event datum, compressing the event datum if the event datum is
6 determined to be compressible;

7 creating a processed event record, the processed event record conforming to a
8 record format; and

9 storing the one or more event data in the processed event record in accordance
10 with the record format.

- 11 12. The apparatus of claim 11, wherein said circuitry is further capable of using
12 characteristics-based compression on each event datum.
- 1 13. The apparatus of claim 12, wherein said circuitry is further capable of using a
2 selected one of one or more compression algorithms to compress the event datum,
3 wherein the selected compression algorithm compresses the event datum in
4 accordance with one or more characteristics of the event datum.
- 1 14. The apparatus of claim 13, wherein said circuitry is further capable of setting the
2 one or more compression algorithms.
- 1 15. A system comprising:

2 circuitry capable of:

3 reading one or more event data, the event data corresponding to an event
4 monitored from a system;

5 for each event datum, compressing the event datum if the event datum is
6 determined to be compressible;

7 creating a processed event record, the processed event record conforming
8 to a record format; and

9 storing the one or more event data in the processed event record in
10 accordance with the record format; and

- 11 a compiler to read the processed event record.
- 1 16. The system of claim 15, wherein said circuitry is further capable of using
2 characteristics-based compression on each event datum.
- 1 17. The system of claim 16, wherein said circuitry is further capable of using a
2 selected one of one or more compression algorithms to compress the event datum,
3 wherein the selected compression algorithm compresses the event datum in
4 accordance with one or more characteristics of the event datum.
- 1 18. The system of claim 17, wherein said circuitry is further capable of setting the one
2 or more compression algorithms.
- 1 19. A machine-readable medium having stored thereon instructions, the instructions
2 when executed by a machine, result in the following:

3 reading one or more event data, the event data corresponding to an event
4 monitored from a system;

5 for each event datum, compressing the event datum if the event datum is
6 determined to be compressible;

7 creating a processed event record, the processed event record conforming to a
8 record format; and

9 storing the one or more event data in the processed event record in accordance
10 with the record format.
- 1 20. The machine-readable medium of claim 19, wherein said instructions, when
2 executed by the machine, additionally result in the machine using characteristics-
3 based compression on each event datum.
- 1 21. The machine-readable medium of claim 20, wherein said instructions, when
2 executed by the machine, additionally result in the machine using a selected one
3 of one or more compression algorithms to compress the event datum, wherein the
4 selected compression algorithm compresses the event datum in accordance with

5 one or more characteristics of the event datum.

1 22. The machine-readable medium of claim 21, wherein said instructions, when
2 executed by the machine, additionally result in the machine setting the one or
3 more compression algorithms.